

IN THE CLAIMS:

The following is a complete listing of the pending claims:

Claims 1 – 5. (cancelled)

6. (currently amended) A stacked inductor comprising:
a semiconductor substrate;
a plurality of conductive layers formed on the substrate, the plurality of conductive layers being arranged from a first conductive layer closest to the substrate to a last conductive layer furthest from the substrate; and
a plurality of conductive spirals corresponding to the plurality of conductive layers such that a first spiral is formed in the corresponding first conductive layer, a second spiral is formed in the corresponding second conductive layer, and so on, wherein each spiral includes at least two concentric turns coiled from a first end at an outer radius of the spiral to a second end at an inner radius of the spiral; wherein the first end of the first spiral forms a first port for the inductor, a second end of the first spiral couples through a first via to the second end of the second spiral, the first end of the second spiral couples through a second via to the first end of the third spiral, and so on such that the a selected second end of the next-to-last spiral couples through a last via to a corresponding the second end of the last spiral, the remaining first end of the last spiral forming a second port for the inductor.

7. (currently amended) The stacked inductor of Claim 6, wherein each turn of each spiral comprises five or more linear segments further comprising a third spiral

inductor having a first end at an outer radius of said spiral and a second end at an inner radius of said spiral on a third layer of said substrate, wherein said second end of said second spiral inductor electrically coupled to said first end of said third spiral inductor.

8. (currently amended) The stacked inductor of Claim 6, wherein said first and second spiral inductors each spiral has a have thickness of between 1 and to 4 μ m.

9. (currently amended) The stacked inductor of Claim 6, wherein said first and second each spiral inductors comprise comprises a conductive metal taken from the group consisting of Cu, Al and alloys thereof.

10. (currently amended) The stacked inductor of Claim 7, wherein the number of linear segments equals eight A stacked inductor comprising:

a substrate; and

a plurality of planer spiral shaped inductors having a first end and a second end, each planer spiral shaped inductor disposed on a different layer of said substrate,

a first end of each of said planer spiral shaped inductors electrically coupled to a second end of another planer spiral shaped inductors disposed on an adjacent layer.

11. (currently amended) The stacked inductor of Claim 6-10, wherein the first port is coupled to a power supply said plurality of planer spiral shaped inductors comprises spiral inductors formed into concentric shapes of at least two turns, wherein each turn includes at least five straight segments.

Claims 12 – 16. (cancelled)

17. (new) The stacked inductor of Claim 6, wherein the selected end of the next-to-last spiral is the second end, the corresponding end of the last spiral thereby being also being the second end.

18. (new) The stacked inductor of Claim 6, wherein the selected end of the next-to-last spiral is the first end, the corresponding end of the last spiral thereby being also being the first end.